

IN THE CLAIMS:

1. (Currently Amended) A chip-device for holding living cells, the device comprising a plurality of wells, each well configured to hold a living cell, a carrier for said wells, the device characterized in that the insides of said wells prevent loss or migration of cells during storage, movement, testing and observation, and inhibit or delay adhesion of living cells thereto.

2. (Original) The device of claim 1, wherein the inside of said wells comprises a material selected from the group consisting of a gel, a hydrogel, polydimethylsiloxane, an elastomer, polymerized para-xylylene molecules, polymerized derivatives of para-xylylene molecules and silicon rubber.

3. (Original) The device of claim 1, wherein said carrier is substantially made of a material selected from the group consisting of a gel, a hydrogel, polydimethylsiloxane, an elastomer and silicon rubber.

4-5. (Canceled)

6. (Previously Presented) The device of claim 1, wherein the size of said wells is changeable.

7. (Original) The device of claim 6, said carrier configured to be deformable in at least one dimension and that upon deformation the size of at least one of said wells is changed.

8-11. (Canceled)

12. (Previously Presented) The device of claim 1, wherein said carrier is formed substantially of a material having an index of refraction between that of water and about 1.4.

13-17. (Canceled)

18. (Original) The device of claim 1, having at least one component made of a gel.

19-21. (Canceled)

22. (Previously Presented) The device of claim 18, wherein the gel contains water, the water content of said gel being greater than about 80% by weight of said gel.

23-26. (Canceled)

27. (Original) The device of claim 18, wherein said gel comprises an active entity.

28. (Canceled)

29. (Currently Amended) The device of claim 18, wherein said carrier or a cover for said device is made of said gel.

30-34. (Canceled)

35. (Currently Amended) The device of claim 1, wherein the insides of said wells ~~delay adhesion~~ inhibit proliferation of living cells ~~thereto~~ therein.

36-41. (Canceled)

42. (Original) The device of claim 1, wherein said wells are juxtaposed.

43. (Currently Amended) The device of claim 42, wherein the interwell area between two said wells is less than about 0.35 the sum of the areas of said two wells.

44-47. (Canceled)

48. (Original) The device of claim 42, wherein a rim of a said well is substantially knife-edged.

49. (Original) The device of claim 1, wherein the dimensions of said wells are less than about 200 microns.

50-55. (Canceled)

56. (Original) The device of claim 1, wherein said wells are enclosures of dimensions such that substantially an entire cell of a certain type is containable within a said enclosure, each said enclosure having an opening at said surface, said opening defined by a first cross section of a size allowing passage of a cell of said certain type.

57-67. (Canceled)

68. (Original) The device of claim 1, further comprising protuberances protruding from said surface between two adjacent wells.

69-73. (Canceled)

74. (Original) The device of claim 1, further comprising at least one wall protruding from said surface, said at least one wall circumscribing at least one area of said surface where the points of the top edge of said wall define a plane.

75-85. (Canceled)

86. (Currently Amended) The device for claim 1, A carrier comprising a plurality of wells disposed on a surface each well configured to hold at least one living cell, the carrier characterized in that wherein the bottoms of said wells are flat.

87-89. (Canceled)

90. (Currently Amended) A chip-device according to claim 1, for holding living cells, the device comprising a carrier having a plurality of wells disposed on a surface each well configured to hold at least one living cell,

the device characterized in that ~~the insides of said wells inhibit adhesion of living cells thereto and~~ said carrier is made of a material having an index of refraction similar to that of water.

91. (Previously Presented) The device of claim 90, wherein said carrier is formed of a material having an index of refraction between that of water and about 1.4.

92-120. (Canceled)

121. (Original) A method of making a chip-device of claim 1 comprising:

(a) providing a template having a negative of features of said surface of said carrier;

(b) contacting said template with a precursor material so as to create said features in said precursor material; and

(c) fixing said features in said precursor material so as to fashion said carrier.

122-129. (Canceled)

130. (Original) The method of claim 121, wherein said precursor material is a plastically deformable precursor material and said fixing said features comprises separating said template from said precursor material.

131. (Canceled)

132. (Original) The method of claim 121, wherein said precursor material is an elastic precursor material.

133-138. (Canceled)

139. (Original) The method of claim 132, wherein said elastic precursor material is a gellable fluid and wherein fixing said features comprises gelling said gellable fluid.

140-144. (Canceled)

145. (Currently Amended) A method of making a chip-device of claim 1 comprising:

(a) providing a carrier having a plurality of wells disposed on or in a surface thereof, each well configured to hold ~~at least one living cell~~ or a specific maximum number of living cells; and

(b) forming the ~~inside of~~ said wells to prevent migration or loss of cells therein during storage, movement, testing and observation, and to inhibit or delay adhesion thereto of living cells held in said wells.

146-152. (Canceled)

153. (Currently Amended) A method of manipulating cells, comprising:

(a) providing a well-bearing component as described in claim 1 including a plurality of wells, wherein each well is configured to hold ~~at least one living cell~~ or a specific maximum number of living cells;

(b) holding a plurality of living cells in a plurality of said wells;

(c) placing a gellable fluid in proximity with said surface so as to fill said plurality of wells; and

(d) gelling said gellable fluid so as to form a gel cover.

154-155. (Canceled)

156. (Canceled)

157-177. (Canceled)

178. (Original) The method of claim 153, further comprising:

(e) subsequent to (d), isolating at least one cell by excising said at least one said cell from said well-bearing component.

179. (Original) The method of claim 153, wherein said gellable fluid comprises an active entity.

180. (Canceled)

181. (Original) The method of claim 153, further comprising:

(e) subsequent to said gelling, contacting an active entity-containing fluid with said gel cover.

182-185. (Canceled)

186. (Original) A method of growing cells comprising:

(a) providing a well-bearing device;
 (b) holding at least one living cell in a well of said well-bearing device; and
 (c) increasing the size of said well so as to provide an increased space for proliferation of said cell.

187-192. (Canceled)

193. (Currently Amended) A method of collecting cells from a biological sample comprising:

(a) providing a well-bearing device, said well-bearing device having:
 (i) a plurality of wells ~~disposed~~ located on or in a surface of said device,
 each well configured to hold at least one cell; and
 (ii) a plurality of protuberances protruding from said surface; and
 (b) contacting the biological sample with said surface so as to remove cells from the biological sample.

194. (New) The method of claim 193, wherein said wells are formed in said surface.

195. (New) The device of claim 1, wherein said wells are formed in a surface of said carrier.

196. (New) The device of claim 1, wherein said wells have a rectangular cross-section.

197. (New) The device of claim 86, wherein said wells are formed in a surface of said carrier.

198. (New) The device of claim 90, wherein said wells are formed in a surface of said carrier.

199. (New) The device of claim 1, wherein said wells are formed in a surface of said carrier.

200. (New) A device for holding living cells, the device comprising:
a plurality of wells, each well configured to hold one living cell of a certain type or a specific maximum number of living cells of said certain type; and
a carrier for said wells,
the device characterized in that said wells delay or inhibit adhesion thereto or proliferation therein of cells inside said wells.

201. (New) The device of claim 200, wherein walls of said wells are formed of or coated with a material that delays or inhibits adhesion or proliferation of cells.

202. (New) The device of claim 201, wherein said material comprises polydimethylsiloxane, is substantially polydimethylsiloxane or is substantially pure polydimethylsiloxane.

203. (New) The device of claim 201, wherein said material comprises a gel.

204. (New) The device of claim 203, wherein said gel comprises a sodium alginate solution.

205. (New) A method of making a cell-study device comprising
(a) providing a carrier having a plurality of wells disposed on or in a surface thereof, wherein each well is to hold one living cell of a certain type or a specific maximum number of living cells of said certain type; and
(b) forming said wells to delay or inhibit adhesion thereto and to delay or inhibit proliferation of living cells held in the wells.

206. (New) The method of claim 205, wherein said wells are formed in the surface of said carrier.

207. (New) The method of claim 205, wherein the insides of said wells are formed of or coated with a material that delays or inhibits adhesion to walls of said wells, or delays or inhibits proliferation of living cells held in the wells.

208. (New) The method of claim 207, wherein the inside of said wells are coated by applying a precursor fluid to the inside of said wells, and solidifying said precursor fluid to form said coating.

209. (New) The method of claim 208, wherein said precursor fluid is solidified by heating said precursor fluid, or cooling said precursor fluid, or polymerizing said precursor fluid, or cross-linking said precursor fluid, or curing said precursor fluid, or irradiating said precursor fluid, or illuminating said precursor fluid, or gelling said precursor fluid, or exposing said precursor fluid to a fixative and waiting a period of time.

210. (New) The method of claim 207, wherein the insides of said wells are coated by depositing a vapor of the material thereon.

211. (New) A method according to claim 210, wherein the insides of said wells are coated by) depositing a vapor is a precursor material, and ii) solidifying the precursor material to form the coating.

212. (New) The method of claim 211, wherein said coating is solidified by heating, or cooling, or polymerizing, or cross-linking, or curing, or irradiating, or, illuminating, or gelling, or exposure to a fixative.

213. (New) The method of claim 211, wherein the of said precursor material is a vapor of para-xylylene molecules or derivatives thereof and the layer comprises the polymerized para-xylylene molecules, or derivatives thereof.

214. (New) The device of claim 200, wherein the interwell area between two said wells is less than about 0.35 the sum of the areas of said two wells.